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DISCOVERIES AND CURRENT EVENTS *

South Australia: Plant Disease Records (1).

Cereals. — In the Murray Mallee district in 1930 there was an appreciable amount of « white-heads ». This was probably due to late root infection with *Ophiobolus graminis* and *Helminthosporium sativum*, though in many cases not sufficient to cause blackening of the stem-bases. Red Rust or Stem Rust (*Puccinia graminis*) was moderate to severe in some areas in 1930 – completely destroying some crops in the Loxton district – and light to moderate in 1931. Flag Smut (*Urocystis tritici*) was slightly more in evidence in infected districts in both years. *Rhizoctonia solani* and Nematodes (*Heterodera schachtii*) occur in small patches in wheat and oat crops every year, mainly in the mallee areas. Cereal smuts were light in both years.

Pastures. — The Red Grass-destroying fungus *Isaria graminiperda* was reported from a number of localities both in the north and in the southeast in 1931. It attacked mainly *Poa bulbosa* in patches of limited extent. This is the first record of the fungus for this State. The introduced grass *Brachypodium distachyum*, which is spreading in the neighborhood of Adelaide, is very severely affected with smut (*Ustilago bromivora* ?) almost every year.

Vines. — Further cases of what is considered to be salt injury to vines following the run of dry seasons were recorded. Frost in October, 1931, caused serious damage to vines in the Clare and Coonawarra districts. A case of court-noué was recorded from Waikerie in 1931, and a case of variegation of the leaves from Clare. With the early break of the season in 1932 considerable trouble was caused by the mould *Botrytis cinerea* in the currant drying areas. A little Anthracnose (*Gloeosporium ampelophagum*) was noted in 1930-31, but on the whole vines have been very free from disease.

Citrus. — The wet winter of 1931 was responsible for Rrown Rot (*Phytophthora hibernalis*) causing considerable losses of citrus fruit in the non – irrigated areas, particularly the Inman Valley. Bacterial Spot (*Bacterium citriputeale*) was also more prevalent than usual. A stem-end rot of the fruit caused by a species of *Phomopsis* agreeing closely with *Phomopsis californica* was recorded

* Under this and the next heading the countries are arranged in French alphabetical order.

(1) Communication from the official correspondent of the Institute, Mr. Geoffrey SAMUEL, M. Sc., Plant Pathologist, Waite Agricultural Research Institute, University of Adelaide, Glen Osmond, South Australia.

in one case from Coromandel Valley. In another case a *Pleospora*, agreeing closely with *Pleospora herbarum*, caused a definite slow rot of a black leathery nature with reddish discoloration at the margins. Both these are new records for the State. A case of *Armillaria mellea* appeared on oranges at Kingston following the digging in of chips from the wood-heap. A few cases of Crinckle (cracking of the pithy part of the rind beneath the surface) were recorded from the drier areas.

Stone and Pome Fruits. — Silver leaf (*Stereum purpureum*) is gradually increasing in amount in the Adelaide hills, having been recorded on plums, apricots, and apples, and was also noted on Kangaroo Island. Black Spot or Scab of Apple (*Venturia inaequalis*) was more prevalent in 1931 – 32 than for some years past, but was not serious. Apple bark rot (*Physalospora cydoniae*) was reported from several localities. Curl-Leaf of peaches (*Taphrina deformans*) was bad in the wetter districts in 1931, and Shot-hole or Scab of apricots (*Clasterosporium carpophilum*) was also more prevalent than usual.

Vegetables. — Irish Blight of potatoes (*Phytophthora infestans*) was more prevalent in 1931 than for a number of years, and was severe again in the early part of 1932, many tons of potatoes being lost in the Mount Gambier district. Bacterial Blight of French beans, agreeing in symptoms with *Phytomonas medicaginis* var. *phaseolicola*, was also the cause of considerable loss of beans in both seasons. Celery blight (*Septoria apii*) was severe again, but control by spraying with Bordeaux Mixture is being more widely adopted. *Armillaria mellea* severely damaged one bed of parsnips and carrots at Kingston. Neck Rot of onions in storage (*Botrytis allii*) and Onion Smudge (*Colletotrichum circinans*) were both recorded for the first time, as also was a *Fusarium* wilt of watermelons.

Tomatoes. — Spotted wilt (virus) was generally distributed in both years, being more severe in 1930-31 than in 1931-32. A severe case of non setting of the fruit due to Mosaic was recorded for a glasshouse. *Macrosporium solani* is becoming more prevalent in glasshouses, and *Fusarium lycopersici* was noted in a few houses. The mite *Phyllocoptes lycopersici* was noted on many occasions, both in glasshouses and outdoors, as also was the root-knot nematode (*Heterodera radicicola*).

Tobacco. — Downy Mildew or Blue Mould of tobacco (*Peronospora hyoscyami*) was more prevalent in tobacco seedbeds in 1931, and in the autumn of 1932 was found on some field crops. Tomato spotted wilt (virus) usually occurs only on odd plants, but in a small field at Mount Gambier in 1932 more than 30 per cent of the plants were lost from this disease.

Ornamental Plants. — Irish blight (*Phytophthora infestans*) was recorded for the first time on seeding petunias in frames in 1931. *Rhizoctonia solani* caused a collar rot of sweet peas in a glasshouse at Marion, which was checked by the application of Cheshunt Mixture. Carnation rust (*Uromyces caryophyllinus*) was recorded for the first time. Hollyhock rust (*Puccinia malvacearum*), marigold rust (*Puccinia calendulae*), and sunflower rust (*Puccinia helianthi*) all occurred more than usual.

Egypt: Locust Report (1).

No reports were received in March and April 1933 on the appearance of locusts.

Scouting desert regions usually visited by *Schistocerca gregaria* continued. In the latter half of April and early in May a car patrol of the Plant Protection Section inspected the area lying between Lats. 23° 10′-27° 30′ and Longs. 33° 35′.

Few scattered individuals of the flaviventris form were found. Some of the valleys were green with vegetation but no breeding was observed.

Eritrea: The Tropical Migratory Locust (*Locusta migratoria migratorioides*) (2).

During April 1933 no swarm of tropical migratory locust made its appearance in the Colony.

Réunion: Plant Parasites Newly Recorded in the Island (3).

Before leaving Madagascar on a mission to Paris I made a study tour in Réunion where I found the presence of the following fungus pests which have not to my knowledge been recorded in this Island previously:

Cassava: *Gloeosporium manihotis* Henn.

Maize: *Puccinia maydis* Bér.

Tobacco: *Erysiphe cichoracearum* DC.

Peach: *Puccinia pruni-spinosae* Pers.; *Taphrina deformans* (Berk.) Tul.

Artocarpus integrifolia: *Rhizopus artocarpi* Rac.

Papaw: *Ovulariopsis Papayae* n. sp.

French bean: *Colletotrichum lindemuthianum* (Sacc. et Magn.) Br. et Cav.; *Isariopsis griseola* Sacc.

Potato: *Phytophthora infestans* (Mont.) de Bary.

Tomato: *Oidium* sp.

Aubergine: *Cercospora* sp.

Albizzia lebbek: *Sphaerophragmium acaciae* Cke.

Erythrina indica: *Ovulariopsis* sp.

Pigeon pea: *Oidium* sp.

Jatropha curcas: *Oidium* sp.

Mulberry: *Phyllactinia corylea* (Pers.) Karst. (*Ovulariopsis moricola* Delacr.).

Oak: *Microsphaera alphitoides* Griff. et Maubl.

(1) Communication from the Chief Entomologist, Plant Protection Section, Ministry of Agriculture, Egypt.

(2) Communication from the official correspondent of the Institute, Dr. Rolando Guidotti, Chief of the Agricultural Bureau of Eritrea, transmitted by the Government of the Colony.

(3) Communication from the official correspondent of the Institute, Mr. G. Bouriquet, Director of the Phytopathological Laboratory of Nanisana, Tananarive.

Southern Rhodesia: Locust Invasion 1933 (1).

Monthly Report No. 4, March, 1933.

The hopper outbreak in the colony has revealed itself more and more clearly during the month under review as of outstanding magnitude. In this respect it far surpasses the heavy outbreak of Brown Locust hoppers following the invasion of the Colony by flying swarms in 1924.

Not only is a larger area of country involved but the distribution of the swarms appears to be considerably denser on the whole.

The weather throughout the month has been warm and dry and the hoppers have continued their development apparently unchecked by either disease or parasites, whilst enemies generally have been comparatively inactive.

1. *Nomadacris septemfasciata.*

Hoppers of this species are reported in all stages of development but the great bulk appear to be in the fifth and sixth hopper stages, whilst a few have already obtained wings.

The winged specimens examined to date exhibit a very different coloration from that of the invading swarms last year. The locusts of the invading swarms were intensly red and exhibited few and inconspicuous minor markings. The base of the hind wings was suffused with purple pink producing a reddish flash when the insect took to wing. The newly matured adults of the present generation, if they all adhere to the type examined, are more or less medium light brown in appearance with some red on the head, thorax and legs. The light coloured median stripe on the pronotum is very conspicuous and sharply defined and is continued down the elytra. The pink suffusion at the base of the hind wings is lacking altogether.

2. *Locusta migratoria migratorioides.*

A few flying swarms, matured in the low veld and in Portuguese East Africa, have been in evidence during the month and one swarm passed just south of Salisbury flying in a westerly direction.

The destruction of the hoppers of this species on the higher veld seems to have been approximately complete in the N. E. districts but the possibility of confusion with the Red Locust makes the position a little uncertain. The swarms in the low veld were maturing generally at the end of the month.

The newly matured adults of this species examined to date also exhibit a browner and more differentiated coloration than those of the invading swarms last September and November. The median light stripe on the pronotum is also conspicuous and clearly defined and is flanked on either side

(1) Communication from the official correspondent of the Institute, Mr. R. W. Jack, F. E. S., Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

by a dark brown patch. This stripe was hardly indicated in the invading swarms, which exhibited a nearly uniform brownish red colour, except on the wings.

The prospect in respect to the behaviour of the Migratory Locust in S. Rhodesia during the dry season is at present uncertain. From recent observation in Nigeria (Lean) the swarms are judged to favour a relative humidity of between 60 % and 80 % and to tend to follow zones within this range. Away from the eastern border the relative humidity over most of S. Rhodesia falls below 60 % from June to August or even later and it is possible that the range of the flying swarms will be limited by this factor.

3. Direction of Flight.

Most newly matured swarms reported to date have shown a tendency to fly in a more or less westerly or south westerly direction.

4. Feeding.

The newly matured swarms, once they have taken to flight, are reported to be feeding voraciously.

5. Parasites and Disease.

Neither parasites nor disease have been in evidence during the month.

6. Enemies.

No unusual activity of locust enemies is reported anywhere, but hawks have been noted following up flying swarms. Red Mites have been noted on newly matured adults.

7. Destruction of Hoppers.

The hopper destruction campaign has been continued vigorously in all infested districts and there has been an incessant demand for more and more poison. The quantity of poison issued up to the end of the month was sufficient to make over four and a half million gallons of spray.

Reliance is still placed on the spraying method. Efforts to introduce the dusting method have met with poor success, one of the main difficulties encountered being lack of wind to distribute the dust. There can be no doubt that in unskilled hands the dusting method is considerably more dangerous than spraying both in respect to stock poisoning and in some degree to the operators. The dusting method also seems to be prodigal of poison compared with spraying.

Baiting experiments have in some cases given good results but the result on the whole has been irregular and the influence of various environmental factors still needs to be elucidated. The indications are at present that baiting is more effective in dry weather than in wet, and it would appear very rash to place much reliance in this method in the light of present indications in view of the fact that locust campaigns in this colony are generally conducted in more or less wet weather.

8. Damage to Crops.

Speaking generally the crops of the farmers have been successfully protected from the hopper throughout the colony although individuals have suffered serious damage.

Native crops have suffered in certain areas, which are difficult of access, but have been successfully protected in most of the more accessible localities. Many cases of loss of native crops have been due to the reluctance of the natives themselves to go to any trouble to protect their own gardens even when supplied with material. In certain areas, largely in Matebeleland, the drought has made it immaterial whether locust hoppers attacked the crops or not.

Tripolitania: Invasion of the Desert Locust (*Schistocerca gregaria*) (1).

The invasion of the desert locust already reported [see this *Bulletin*, 1933, No. 4, p. 82] has up to the present remained within the triangle El Uotia–Agelat–Jefren. All the movements and halts of the insects have been followed by an observation and destruction service in which have participated the civil and military authorities, the troops and the populace. The control campaign which was at first directed against the adults was later directed against the eggs by ploughing and collecting. To encourage the egg collecting a Governatorial Decree was enacted granting an award of 4 liras per kg. of eggs [see this *Bulletin*, 1933, No. 5, p. 111].

Up to the present over 100 quintals of eggs have been collected which if they had hatched would have produced hopper bands capable of destroying all the zones of European and native settlements.

A certain amount of hatching has however been reported from eggs which had in spite of all escaped the control operations. But as the breeding centres have been ascertained they will be easy to destroy with complete certainty.

Up to the present, although it is not possible to make forecasts owing to the continued presence of locusts in South Tunisia and in Algeria, the control is being effectively carried ont in the Colony.

Turkey: Destructive Vertebrates (2).

In Asiatic Turkey (Anatolia) as well as in European Turkey rodents are so widespread that nearly every year they cause considerable damage to crops. During 1930-31 they multiplied to such an extent in both parts of the country that they seriously endangered the harvests.

I took this opportunity to have sent to me several hundreds of the rodents collected in the different regions.

(1) Communication from the Government of Tripolitania transmitted to the International Institute of Agriculture by the Italian Ministry for the Colonies (Office of Studies and Propaganda).

(2) Communication from the official correspondent of the Institute, Mr. M. Sureya, Councillor of State, Ankara.

Part of them I sent to the Zoological Museums of Vienna, Berlin and London for purposes of identification. All have not yet been identified but I can indicate here the names of the species already determined: — *Apodemus flavicollis, Microtus lydius, M. agrestis, M. güntheri, Citellus citellus* and *Spalax hungaricus.*

With a view to the control of these rodents the Ministry of Agriculture concentrated the locust control organisation in the regions in which the rodents had made their appearance.

The best season for control work is the winter. Legislative measures compel farmers to take steps to control rodents, locusts and any other pest causing damage by their mass reproduction.

For the control of the rodents poisoned grain and the ' Hora ' apparatus have been mainly employed.

The grain is treated with arsenic and strychnine. It was found an effective and economic means of control in various regions. The ' Hora ' apparatus. by which asphyxiating gas is introduced into the rodents' burrows, may be used in winter as well as in summer ; it is highly efficacious, but costly.

Virus has also been used. Experiments made with this method have given results partly positive and partly negative.

In Anatolia the potato, onion and garlic crops have been attacked by *Spalax* spp. In consequence of the fact that in uncultivated land these rodents raise mounds of earth resembling molehills many farmers attribute to moles the damage done to their fields of potatoes and onions. They use traps as a control measure,

Most satisfactory results have been obtained by burying in the potato fields tubers poisoned with a solution of sodium arsenate.

LEGISLATIVE AND AMMINISTRATIVE MEASURES

Germany. — By Presidential Decree of 16 March 1933 concerning the control of grape phylloxera [*Phylloxera vastatrix*], vine growers who in the course of the anti-phylloxera campaign shall have submitted losses by the destruction or damage of their vines shall be entitled to suitable compensation. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1933, 13. Jahrg, Nr. 5, S. 38).

*** A Decree of 20 April 1933 with a view to preventing the introduction of the San José scale [*Aspidiotus perniciosus*] contains an amendment to the Decrees of 3 November 1931 and 8 July 1932 [see this *Bulletin*, 1932, No. 2, pp. 24-25 and No. 11, p. 182].

The Minister of Agriculture is authorised, in agreement with the Minister of Finance, to extend to countries other than those now suspected of infection with the San José scale the regulation limiting the importation of live plants and parts of live plants, of fresh fruit and fruit waste to the customs offices expressly authorised for the purpose; he has the right to make importation of such products dependent on an inspection carried out on entry at the expense of the person concerned and which must not reveal the presence or suspected presence

of the San José scale. He may, further, extend the other regulations in force to any other country in which the presence of the San José scale shall be proved (1).

England and Wales. — With the object of preventing the introduction of the cherry fruit fly [*Rhagoletis cerasi*], the Importation of Raw Cherries Order of 1933, dated 9 May 1333, regulates the importation of raw cherries grown in France, Italy and Germany into England and Wales during the 1933 season. ([Ministry of Agriculture and Fisheries]. The Importation of Raw Cherries Order of 1933. Dated 9th May, 1933. [London, 1933], 4 pp. Mimeographed).

Argentine Republic. — By Presidential Decree of 22 August 1932, *Wedelia glauca* – a Composite known in different zones of the Republic under the common names of ' sunchillo ', ' suncho ', ' flor de sapo ', ' yuyo ', ' yerba de sapo ' or ' chilquilla ' – has been declared a noxious weed. (Ministerio de Obras Públicas. *Boletín de Agricultura de la Provincia de Córdoba*, Córdoba, Julio a Diciembre de 1932, año XIII, núm. 139, pág. 47).

*** By another Presidential Decree of the same date *Pseudomonas* [*Bacterium*] *Savastanoi*, the causal agent of the bacterial tumours of the olive, has been declared an agricultural scourge (*Ibid.*, pág. 47).

Argentine Republic (Province of Córdoba). — By Decrees Nos. 15301 and 15560, series C, of 8 September and 28 October 1932, the personnel of the provincial administration is expected to lend its assistance to the Officials of the ' Defensa Agrícola Nacional ' for the control of agricultural pests and particularly of locusts. (Ministerio de Obras Públicas. *Boletín de Agricultura de la Provincia de Córdoba*, Córdoba, Julio a Diciembre de 1932, año XIII, núm. 139, págs. 43 y 44).

Western Australia. — In virtue of a By-law made and passed by the Koorda Road Board on 8 November 1932 and approved by the Lieut. Governor and Administrator in Executive Council on 5 January 1933, every owner and every occupier of land upon which the noxious weeds known as Spanish radish (*Raphanus raphanistrum*) and wild turnip (*Brassica tournefortii*) are growing shall, before the 15th day of July in each year, thoroughly destroy such noxious weeds by uprooting, or by such other means as the Board may direct, to the satisfaction of the Board. (*Government Gazette of Western Australia*, Perth, 20 January 1933, No. 3, p. 98).

*** On 27 January 1933 the Lieut. Governor and Administrator in Executive Council revoked the declaration of *Watsonia* as a noxious weed within the boundaries of the following Road Districts : — namely, Canning, Gosnells, Murray,

(1) Communication from the Biologishe Reichsanstalt für Land- und Forstwirtschaft, Berlin-Dahlem, official correspondent of the Institute.

Capel, Manjimup, Harvey, and Balingup Road Districts [see this *Bulletin*, 1933, No. 1, p. 11], and also approved of *W. angusta* being declared a noxious weed within the boundaries of each and all of the said Road Districts. (*Ibid.*, 3 February 1933, No. 7, p. 213).

Belgium. — By Ministerial Decree of 10 April 1933 any person finding the presence of the Colorado beetle (*Leptinotarsa decemlineata*) in his crops or warehouses is required immediately to inform the Burgomaster of the Commune. The latter will inform the Minister of Agriculture by telegraph.

The crops declared infested with Colorado beetle will be submitted to the treatments prescribed by the Minister of Agriculture or his agent.

The same regulation may be applied to the crops surrounding the land declared to be infested with the Colorado beetle.

The organisation of the control against this insect is placed under the direction of a special Commission called the ' Comité antidoryphorique '.

Offences under the present Decree will be punishable by the penalties provided in Art. 21 of the Royal Decree of 13 May 1929.

If the application of these regulations shall have caused serious losses to the farmer of the land the Minister of Agriculture may decide to grant compensation. (*Moniteur Belge*, Bruxelles, 29 avril 1933, 103ème année, nº 119, p. 2258-2259).

United States of America. — By Quarantine No. 69 approved 20 February 1933, on and after 1 July 1933, the following plants and plant products, when used as packing materials, are prohibited entry into the United States from the countries and localities named :—

(a) Rice straw, hulls, and chaff, from all countries.

(b) Corn and allied plants (maize, sorghum, broomcorn, sudan grass, napier grass, Job's tears, teosinte, *Polytoca, Sclerachne, Chionachne*); all parts, from all countries except Mexico, and the countries of Central America, the West Indies, and South America.

(c) Cotton and cotton products (lint, waste, seed cotton, cottonseed and cottonseed hulls) ; from all countries.

(d) Sugarcane : all parts of the plant including bagasse, from all countries.

(e) Bamboo ; leaves and small shoots, from all countries.

(f) Leaves of plants ; from all countries.

(g) Forest litter ; from all countries.

(h) Soil containing an appreciable admixture of vegetable matter, from all countries, except such types of soil or earth as are authorized as safe for packing (peat, peat moss, Osmunda fibre).

On and after 1 July 1933, the following plants and plant products, when used as packing materials, will be permitted entry into the United States from the countries and localities named only in accordance with the rules and regulations promulgated supplemental to this quarantine :

(a) Cereal straw, chaff, and hulls, other than rice (such as emmer, spelt, oats, barley, and rye) ; from all countries.

(b) Corn and allied plants (maize, sorghum, broomcorn, sudan grass, napier grass, Job's tears, teosinte, *Polytoca, Sclerachne, Chionachne*); all parts, from Mexico and the countries of Central America, the West Indies and South America.

(c) Willow twigs ; from Europe.

(d) Grasses and hay and similar indefinite dried or cured masses of grasses, weeds, and herbaceous plants ; from all countries.

(e) Soil containing an appreciable admixture of vegetable matter, from all countries, which is authorized as safe for packing. (Quarantine on packing materials. *U. S. Department of Agriculture. Office of Information. Press Service*, Washington, D. C., February 23, 1933, 7 pp.).

France. — By Decree of 5 April 1933 the wording of Art. 2 of the Decree of 8 March 1932 relating to the San José scale (*Aspidiotus perniciosus*) [see this *Bulletin*, 1932, No. 4, p. 57] is replaced by the following :—

Art. 2. — Importation into France of the products referred to in the preceding article, but originating in and coming from countries other than those affected by the prohibition contained in the same article, is authorised only if the consignments are accompanied by a statement from the competent administrative authority of the country of origin indicating the place of production. When necessary Orders by the Minister of Agriculture will specify the plants or plant parts for which such a statement is not required. (*Journal Officiel de la République Française*, Paris, 15 avril 1933, LXV^ème année, n° 90, p. 3883).

*** By Ministerial Decree of 20 April 1933 has been instituted at the Ministry of Agriculture, Direction of Agriculture, a Commission charged with the study of the conditions of the organisation and inspection of crops and plants of seed potatoes regularly submitted to phytosanitary control by the State. (*Journal Officiel de la République Française*, Paris, 22 avril 1933, LXV^ème année, n° 95, p. 4217).

Italy (1). — By Letter No. 13612 of 29 March 1933 addressed to the Directors of the Itinerant Schools of Agriculture (' Cattedre ambulanti d'Agricoltura ') and relating to the preventive defence against the Colorado potato beetle [*Leptinotarsa decemlineata*], the Minister of Agriculture and Forests prescribes that, in addition to the rigorous supervision exercised by the Phytopathological Observatories responsible for phytosanitary control at the frontier customs offices, a special supervision of the potato crops shall be exercised by the personne of the said Schools.

*** By Ministerial Decree of 15 May 1933, an obligatory Consortium (Syndicate) of the olive growers of the Province of Spezia has been formed, which has among other purposes that of carrying out the control of diseases and pests of the olive. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 26 maggio 1933, anno 74°, n. 122, p. 2212).

(1) Communication from the Ministry of Agriculture and Forests.

Morocco (French Zone). — By Decree of the Director General of Agriculture, Trade and Land Settlement, dated 31 March 1933, the importation or transit of products or commodities enumerated in article 5 of the Dahir of 20 September 1927, relating to the sanitary police regulation of plant products in the French Zone of the Sherifian Empire, can be effected only through the ports of Casablanca, Port-Lyautey and the frontier post of Oujda.

Following on the sanitary inspection of the said products or commodities, carried out at their entry into the French Zone of the Sherifian Empire, a report is drawn up by the Officer of the ' Défense des Cultures ' in charge of the inspection. This document which must be forwarded to the consignee or to his representative includes a statement of the disinfection or of the fumigation, if such has proved necessary.

In the event of its having proved necessary to destroy or to return to the consignor the products or commodities, the Customs office informs the consignee or his representative of the fact.

In the case of any destruction of commodities or products a full report must be drawn up.

The products or commodities enumerated in paragraph 1 of article 5 of the Dahir aforementioned, with the exception of seeds, fruits and vegetables other than potatoes, tomatoes or aubergines must be accompanied by :—

(1) a copy, certified as exact, of the invoice of the consignment, stating :—

(a) the botanical species and varieties included in the consignment ;

(b) the name and address of the sender and of the establishment from which the material comes ;

(c) the name and address of the consignee ;

(d) the weight of the packages, as well as the marks and numbers affixed, and their contents in each case;

(2) a certificate of sanitary inspection in full accordance with the model certificate annexed to the present Decree.

The provisions of the Decree of 19 February 1931 are annulled, with the exception of the prescriptions of the last paragraph of article 4 which remain in force for three months from the date of the promulgation of the present text. (Empire Chérifien. Protectorat de la République Française au Maroc. *Bulletin Officiel*, Rabat, 21 avril 1933, XXII^{ème} année, n° 1069, p. 373).

*** By Decree of the Director General of Agriculture, Trade and Land Settlement, dated 1 April 1933, consignments of tomatoes, aubergines and potato tubers intended for the French Zone of the Sherifian Empire or requiring transit through it must be accompanied by a certificate of sanitary inspection in accordance with the model certificate annexed to the present Decree as well as by a duplicate of the invoices referring to the consignment.

On these documents statements must be made, in addition to those in regard to the description of the consignment and the place of cultivation, as to the variety to which the potatoes, tomatoes or aubergines belong, as well as the name, address and mark of the sender and the name and address of the consignee.

The certificates of sanitary inspection should also attest that the accompanying consignments of potatoes, tomatoes or aubergines, come from crops situated more than twenty kilometres from the fields infested by Colorado beetle (*Leptinotarsa decemlineata*) or by wart disease (*Synchytrium endobioticum*).

Consignors of potatoes, tomatoes and aubergines should include in their consignments only packages of which the packing materials, wrappings, containers, sacks, canvases, boxes, barrels, cases, baskets, and in general any material other than the tubers and vegetables in question, are strictly new.

Apart from the ports or the frontier post specified in the Decree of 31 March 1933 relating to the sanitary police regulation of plant products, consignments of potatoes may be imported by the ports of Rabat, Mazagan, Safi and Mogador, when the consignments in question do not weigh less than 20 quintals.

Whenever fumigation or disinfection is ordered by the Officer in charge of the sanitary inspection, the consignments are, as the consignee prefers, sent back to the consigner or forwarded by sea to the ports of Casablanca or Port-Lyautey.

Consignments including packages not complying with the provisions of the present Decree are sent back as a whole. This measure is without prejudice to the application of the provisions of the Dahir of 20 September 1927, relating to the sanitary police regulation of plant products, and of the provisions of the Decrees issued in application of the said Dahir.

The provisions of the present Decree will come into force three months after promulgation.

The provisions of the Decrees of 25 May 1928, 9 November 1928 and 15 June 1929 as well as the last paragraph of Article 4 of the Decree of 19 February 1931, will be annulled on that date. (*Ibid.*, p. 373-374).

*** A Decree of the Director General of Agriculture, Trade and Land Settlement, dated 4 April 1933, fixes the tariff of charges due for the costs of fumigation of plant products for importation. (*Ibid.*, p. 374-375).

*** By Decree of the Director of Waters and Forests, dated 7 April 1933, owners or holders of land included within certain zones of the region of Meknès are authorised until 2 September 1933 to destroy by any means except fire rabbits which are causing damage to their crops. (Empire Chérifien. Protectorat de la République Française au Maroc. *Bulletin Officiel*, Rabat, 14 avril 1933, XXII[ème] année, n° 1068, p. 346).

Greece (1). — The Presidential Decree of 24 March 1933 published in No. 81 (29 March 1933) of the Official Journal, which came into force on 29 April 1933, prescribes as follows :—

Art. 1. — § 1. – The importation and transit in the Republic of potatoes and parts of potatoes, also of bags and other packings which have served for

(1) Communication from the official correspondent of the Institute, Mr. A. Ayoutantis, Chief of the Phytopathological Section of the Ministry of Agriculture, Athens.

their transport and storage, coming from countries attacked by the Colorado beetle (*Doryphora* [*Leptinotarsa*] *decemlineata*) or by wart disease (*Synchytrium endobioticum*) are forbidden.

§ 2. – Importation and transit in the Republic of potatoes coming from countries other than those affected by the ban contained in the preceding paragraph are authorised on the following conditions :—

(*a*) If the potatoes are packed the packing materials (bags, baskets, boxes, etc.) must be new and sealed by the official Plant Protection Service of the country of origin.

If the potatoes are transported by rail the wagons must be closed and sealed as above.

(*b*) Each consignment of potatoes must be accompanied by two copies of the certificate of health and origin issued in conformity with the model annexed to the present Decree, in the language of the country of origin and in French, or officially translated into Greek ; one of the two copies shall remain at the Customs Office by which the entry and transit of the potatoes were effected and the other shall accompany the consignment *.

This certificate must not have been issued more than 20 days before the date of the loading of the potatoes.

The foreign authorities issuing the certificate must then send the original to the Ministry of Agriculture (Phytopatological Section) at Athens.

For importations of potatoes effected by rail the two copies of the certificate of health and origin must be annexed to the way-bill.

If a consignment includes several wagons, each wagon must be accompanied by two copies of the certificate issued for each wagon separately.

§ 3. – The importation of potatoes coming from a country free from the Colorado beetle and wart disease, but having crossed a country infected with this insect or fungus, is authorised on condition that they are packed and sealed by the official Plant Protection Service of the country of origin.

If they are transported by rail the formalities specified in the preceding paragraph, will be applicable.

§ 4. – The frontier Customs Offices, in the case of transport by land, or of the ports in the case of transport by sea, will forbid the entry and transit of potatoes, their parts, packings, etc., if the consignments do not comply absolutely with the conditions of the present Decree.

§ 5. – The entry and transit of potatoes in the Republic may take place only by the Customs Office of Eidomeni and by the ports of Piraeus, Salonica and Patras.

§ 6. – The countries at present considered as infested by the Colorado beetle are France, exclusive of the French Colonies and Corsica, the United States of America and Canada.

§ 7. – The countries at present considered infected with wart disease are Austria, Belgium, France, Germany, Denmark, Switzerland, Ireland, the Netherlands, Great Britain, Norway, Poland, Sweden, Czechoslovakia and Finland.

* The model certificate referred to in the present Decree corresponds to that annexed to the International Convention for Plant Protection (Rome, 16 April 1929) [see this *Bulletin*, 1929, No. 4, p. 55].

Art. 2. — The entry of live plants and parts of live plants, of bulbs, of rhizomes and tubers (other than potatoes), on condition that they do not fall under the prohibitions contained in the measures in force against grape phylloxera [*Phylloxera vastatrix*], is authorised only if each consignment is accompanied by an official certificate of the country of origin stating that the products are free from Colorado beetle and that this beetle does not exist in the region where the products were grown nor within a radius of 100 kilometres.

Art. 3. — The importation of seed potatoes is allowed whatever their origin on the following conditions :—

(1) A permit from the Ministry of Agriculture must be obtained in advance ;

(2) The potatoes must be packed ;

(3) The packings must be absolutely new ;

(4) Each package must be sealed by the official Plant Protection Service of the country of origin ;

(5) Each consignment must be accompanied by a certificate of health and origin complying with the conditions contained in Art. 1 of the present Decree, by a statement from the firm supplying the seed potatoes specifying, in addition to the particulars of the consignment, the variety of the potato, and by a declaration that the potatoes are good for planting.

Art. 4. — The Ministry of Agriculture reserves the right to have the potatoes for import and the products specified in Art. 2 of the present Decree inspected by special officials, even in cases in which they comply with all the conditions of the said article.

If it results from this inspection that the potatoes or other products are carriers of the Colorado beetle, of the potato tuber moth (*Phthorimaea operculella*) or of wart disease these products will be either returned within 15 days at the expense of the importer, or submitted to disinfection also at the expense of the importer, whenever this measure shall be judged sufficient and the means of disinfection are available in the port of entry, or shall be destroyed, again at the expense of the importer, without any compensation being payable.

The destruction shall take place immediately if storage of the potatoes is considered dangerous, or after 15 days.

The destruction will be carried out in conformity with the regulations of Art. 2 of Law 217.

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NOTES

Congress for the Sanitary Defence of Plants. — This Congress, which is being organised by the National League for the Control of Crop Diseases and Pests – 5, Avenue de l'Opéra – will take place in Paris on 25, 25 and 26 January 1934.

The Congress will be supplemented by an Exhibition of apparatus and products used in the control of crop diseases and pests which will remain open from 23-28 January 1934.

The main purpose of this Congress is to facilitate the popularisation by the experts of good control means and their methods of application.

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